

What is claimed is:

1. A method comprising:

transmitting a frame from a transmitting device to a receiving device via a communication network of a data storage system;

enabling an encoding operation of said transmitting device to encode decoded data into encoded data and transmitting said encoded data in said frame via said communication network if said receiving device has a decoding operation capable of decoding said encoded data into said decoded data; and

disabling said encoding operation and transmitting said decoded data in said frame via said communication network to said receiving device if said receiving device does not have said decoding operation capable of decoding said encoded data into said decoded data.

2. The method of claim 1, wherein said encoding operation comprises a data compression operation, said encoded data comprises compressed data, said decoding operation comprises a data decompression operation, and said decoded data comprises decompressed data.

3. The method of claim 2, wherein said decompressed data is provided by transport layer circuitry of said transmitting device to said data compression operation and an output of said data compression operation is provided to link layer circuitry, said link layer circuitry providing said frame for transmission from said transmitting device to said receiving device.

4. The method of claim 2, wherein said decompressed data is provided by memory of said transmitting device to said data compression operation and an output of said data compression operation is provided to transport layer circuitry of said transmitting device.

5. The method of claim 1, wherein said encoding operation comprises a data encryption operation, said encoded data comprises encrypted data, said decoding operation comprises a data decryption operation, and said decoded data comprises decrypted data.

6. The method of claim 1, wherein said encoding circuitry comprises a data stripping operation, said encoded data comprises stripped data, and said decoding operation comprises a data reconstruction operation to reconstruct said decoded data from said stripped data.

7. An apparatus comprising:  
encoding circuitry capable of encoding decoded data into encoded data; and  
protocol engine circuitry capable of transmitting a frame from said apparatus to a receiving device via a communication network of a data storage system, and capable of detecting if said receiving device has decoding circuitry capable of decoding said encoded data into said decoded data, said encoding circuitry providing said encoded data if said receiving device has decoding circuitry capable of decoding said encoded data into said decoded data, and said encoding circuitry providing said decoded data if said receiving device does not have decoding circuitry capable of decoding said encoded data into said decoded data.

8. The apparatus of claim 7, wherein said encoding circuitry comprises data compression circuitry, said encoded data comprises compressed data, said decoding circuitry comprises data decompression circuitry, and said decoded data comprises decompressed data.

9. The apparatus of claim 8, wherein said protocol engine circuitry comprises transport layer circuitry, said data compression circuitry, and link layer circuitry, said transport layer circuitry capable of constructing a decompressed unit of said decompressed data for transmission, said compression circuitry capable of compressing said decompressed data into compressed data and providing a compressed unit of said compressed data to said link layer circuitry, said link layer circuitry capable of receiving said compressed unit and creating said frame for transmission to said receiving device, said frame comprising said compressed unit.

10. The apparatus of claim 8, wherein said protocol engine circuitry comprises transport layer circuitry and link layer circuitry, said data compression circuitry capable of receiving decompressed data from memory of said apparatus, compressing said decompressed data into compressed data, and providing said decompressed data to said transport layer circuitry, said transport layer circuitry capable of constructing a full sized unit of said compressed data for transmission, said link layer circuitry capable of receiving said full sized unit and creating said frame for transmission to said receiving device, said frame comprising said full sized unit of compressed data.

11. The apparatus of claim 7, wherein said encoding circuitry comprises data encryption circuitry, said encoded data comprises encrypted data, said decoding circuitry comprises data decryption circuitry, and said decoded data comprises decrypted data.

12. The apparatus of claim 7, wherein said encoding circuitry comprises data stripping circuitry, said encoded data comprises stripped data, and said decoding circuitry comprises data reconstruction circuitry to reconstruct said decoded data from said stripped data.

13. A system comprising:

a circuit card comprising an integrated circuit, said circuit card capable of being coupled to a bus, said integrated circuit comprising:

encoding circuitry capable of encoding decoded data into encoded data; and

protocol engine circuitry capable of transmitting a frame from said apparatus to a receiving device via a communication network of a data storage system, and capable of detecting if said receiving device has decoding circuitry capable of decoding said encoded data into said decoded data, said encoding circuitry providing said encoded data if said receiving device has decoding circuitry capable of decoding said encoded data into said decoded data, and said encoding circuitry providing said decoded data if said receiving device does not have decoding circuitry capable of decoding said encoded data into said decoded data.

14. The system of claim 13, wherein said encoding circuitry comprises data compression circuitry, said encoded data comprises compressed data, said decoding circuitry comprises data decompression circuitry, and said decoded data comprises decompressed data.

15. The system of claim 14, wherein said protocol engine circuitry comprises transport layer circuitry, said data compression circuitry, and link layer circuitry, said transport layer circuitry capable of constructing a decompressed unit of said decompressed data for transmission, said compression circuitry capable of compressing said decompressed data into compressed data and providing a compressed unit of said compressed data to said link layer circuitry, said link layer circuitry capable of receiving said compressed unit and creating said frame for transmission to said receiving device, said frame comprising said compressed unit.

16. The system of claim 14, wherein said protocol engine circuitry comprises transport layer circuitry and link layer circuitry, said data compression circuitry capable of receiving decompressed data from memory of said apparatus, compressing said decompressed data into compressed data, and providing said decompressed data to said transport layer circuitry, said transport layer circuitry capable of constructing a full sized unit of said compressed data for transmission, said link layer circuitry capable of receiving said full sized unit and creating said frame for transmission to said receiving device, said frame comprising said full sized unit of compressed data.

17. The system of claim 13, wherein said encoding circuitry comprises data encryption circuitry, said encoded data comprises encrypted data, said decoding circuitry comprises data decryption circuitry, and said decoded data comprises decrypted data.

18. The system of claim 13, wherein said encoding circuitry comprises data stripping circuitry, said encoded data comprises stripped data, and said decoding circuitry comprises data reconstruction circuitry to reconstruct said decoded data from said stripped data.

19. The system of claim 13, wherein the receiving device comprises a mass storage device.

20. An article comprising:  
a storage medium having stored thereon instructions that when executed by a machine result in the following:

transmitting a frame from a transmitting device to a receiving device via a communication network of a data storage system;

enabling an encoding operation of said transmitting device to encode decoded data into encoded data and transmitting said encoded data in said frame via said communication network if said receiving device has a decoding operation capable of decoding said encoded data into said decoded data; and

disabling said encoding operation and transmitting said decoded data in said frame via said communication network to said receiving device if said receiving device

does not have said decoding operation capable of decoding said encoded data into said decoded data.

21. The article of claim 20, wherein said encoding operation comprises a data compression operation, said encoded data comprises compressed data, said decoding operation comprises a data decompression operation, and said decoded data comprises decompressed data.

22. The article of claim 21, wherein said decompressed data is provided by transport layer circuitry of said transmitting device to said data compression operation and an output of said data compression operation is provided to link layer circuitry, said link layer circuitry providing said frame for transmission from said transmitting device to said receiving device.

23. The article of claim 21, wherein said decompressed data is provided by memory of said transmitting device to said data compression operation and an output of said data compression operation is provided to transport layer circuitry of said transmitting device.

24. The article of claim 20, wherein said encoding operation comprises a data encryption operation, said encoded data comprises encrypted data, said decoding operation comprises a data decryption operation, and said decoded data comprises decrypted data.

25. The article of claim 20, wherein said encoding circuitry comprises a data stripping operation, said encoded data comprises stripped data, and said decoding operation comprises a data reconstruction operation to reconstruct said decoded data from said stripped data.